IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Serial No..10/559,697
Filing Date...August 26, 2006
Confirmation No...3817
Inventorship..Axel Clausen
Group Art Unit...2611
Examiner .... Michael R. Neff
Attorney Docket No. LAN0076US
Title: METHOD FOR REDUCING THE CREST FACTOR

PRE-APPEAL BRIEF REQUEST FOR REVIEW

IN RESPONSE TO THE FINAL OFFICE ACTION OF MAY 12, 2010

To: Mail Stop AF
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Sir:

   In accordance with the requirements provided in the Official Gazette Notice of July 12, 2005, the Applicants respectfully submit the following arguments as a Pre-Appeal Brief Request for Review, which is being filed concurrently with a Notice of Appeal, in response to the Final Office Action of May 12, 2010, in connection with the above-identified application.

   Claims 8, 11 – 14, 16 – 19, and 21 – 23 remain pending for examination. **Claims 8 and 16** are independent. Applicants dispute the contention that the pending claims do not place the application in condition for allowance.

Reason for Request

The Applicants respectfully submit that the outstanding rejections under 35 U.S.C. §103(a) are in error. These rejections include:

(a) **Claims 8 and 11 – 14** were rejected as being unpatentable over **Awater**, *et al.,* (U.S. Patent 6,175,551; hereafter "**Awater**") in view of **Schenk** (U.S. Patent 6,529,925; hereafter "**Schenk**") and **Henkel**, *et al.,* (U.S. Publication "PAR Reduction Revisited: An Extension of Tellado's Method"; hereafter "**Henkel**").

(b) **Claims 16 – 19 and 21 – 23** were rejected as being unpatentable over **Awater** in view of **Henkel**.

More particularly, the rejection under 35 U.S.C. §103(a) should be withdrawn because the rejections fail to establish a *prima facie* case of obviousness.

Independent **Claim 8** recites, with emphasis added:

A method..., **at least one carrier being reserved which is not provided for the data transmission**, the method comprising:
...performing crest factor reduction corresponding to the predetermined data frame based at least in part on peak values within the cyclic prefix of the predetermined data frame, by:
(a) **filtering the data symbol and the cyclic prefix**;
(b) **determining whether a time-domain function of the data symbol and of the cyclic prefix within the predetermined data frame exhibits at least one peak value that exceeds a first threshold**;
(c) **determining an amplitude of an exhibited peak value and an associated position within the predetermined data frame**;
(d) **generating a correction function by scaling and transposing a sample correction function in dependence on the amplitude and associated position of the exhibited peak value**;
(e) **using the at least one carrier which is not available for data transmission for generating the sample correction function in the time domain**; and
(f) **modifying the data symbol to be transmitted by superimposing the correction function**.

The portions highlighted in the above listing of **Claim 8** are those features acknowledged in the outstanding rejection as <u>not</u> being disclosed by **Awater**.

While the Applicants do not presently disagree with the assertion made in the rejection that **Schenk** discloses "where at least one carrier being reserved which is not provided for the data transmission ([Schenk] Col. 1, lines 438 – 60)," the Applicants disagree that **Henkel** is able to compensate for, at least, the acknowledged deficiencies of **Awater** regarding the remaining highlighted portions of independent **Claim 8** that are recited *within* the recitation of "performing crest factor reduction..."

More particularly, the rejection points to the description at Page 31-2 through Page 31-3 of **Henkel** as disclosing the portions highlighted above in the partial listing of **Awater**. As stated above, the Applicants respectfully disagree.

At Page 31-2, col. 2, **Henkel** states:

> ...If the [frequency] bins are chosen at random, after a certain number of trials, one is able to find a set of such bins that shows a sufficient peak compared to the sidelobes in the corresponding time-domain vector.

Henkel continues by describing a "Dirac-like time domain signal p" that comprises the frequency bins that are compared to a corresponding time-domain vector in order to find a set that shows a sufficient peak.

Still, the Applicants submit that there is no description on Page 31-1, or elsewhere, of the following features of **Claim 8**:

> (b) **determining whether a time-domain function of the data symbol and of the cyclic prefix within the predetermined data frame exhibits at least one peak value that exceeds a first threshold**;

The reference does not specify that *it is a time-domain function of the data symbol and of the cyclic prefix* within the predetermined data frame that exhibits at least one peak value that exceeds a first threshold or even that a determination is made as to whether the time-domain function exhibits at least one peak value exceeding a first threshold value.

Further, at Page 31-2, col. 2, **Henkel** describes, with reference to Figure 4:

The uppermost blocks locate the peak of the oversampled Dirac-like function. The subsequent block with rounded edges realizes a time shift to zero and the neighboring $L - 1$ positions...The shift to zero is required, since an arbitrary filter response will also place the peak of the Dirac-like function to some arbitrary position.

The Applicants submit, though, nowhere in this description, or elsewhere in **Henkel**, is there a sufficient disclosure to teach, or even suggest, the claimed feature of:

(c) **determining an amplitude of an exhibited peak value and an associated position within the predetermined data frame.**

Even further, though **Henkel** describes, at Page 31-2, col. 1, that the shift in the oversampled signal is realized by the (circular) time shift property of a particular DFT transform, there is still no disclosure that is even suggestive of:

(d) **generating a correction function by scaling and transposing a sample correction function in dependence on the amplitude and associated position of the exhibited peak value.**

Accordingly, in view of, at least, the foregoing deficiencies of **Henkel**, it is respectfully submitted that the proposed combination of **Awater**, **Schenk**, and **Henkel** is altogether incapable of even suggesting the following more comprehensive recitation from **Claim 8**:

performing crest factor reduction corresponding to the predetermined data frame based at least in part on peak values within the cyclic prefix of the predetermined data frame.

Therefore, it is respectfully submitted that independent **Claim 8**, as well as corresponding dependent **Claims 11 – 14**, are patentable over the proposed combination of references, and so the current rejection (a) under 35 U.S.C. §103(a) should be reconsidered and withdrawn.

Just as the proposed combination of **Awater, Schenk, and Henkel** fails to teach or suggested the acts of "(c) determining..." and "(d) generating...," as recited in **Claim 8**, it is respectfully submitted that the proposed combination of **Awater and Henkel** fails to teach or suggest at least the below emphasized recitation, which includes similar acts as those discussed in connection with **claim 8** hereinabove, of **claim 16**.

Independent **Claim 16** recites, with emphasis added:

A method... comprising:

...(b) performing crest factor reduction corresponding to the predetermined data frame **by determining an amplitude of an identified peak value and an associated position within the predetermined data frame**; and

(c) **generating a correction function by scaling and transposing a sample correction function in dependence on the amplitude and associated position of the identified peak value** and using at least one carrier which is not available for data transmission for generating the sample correction function in the time domain.

Therefore, it is respectfully submitted that independent **Claim 16**, as well as corresponding dependent **Claims 17 – 19 and 21 – 23**, are patentable over the proposed combination of references, and so the current rejection (b) under 35 U.S.C. §103(a) should be reconsidered and withdrawn.

Conclusion

Applicants respectfully request that the rejections under §103(a) be withdrawn, and the pending claims be allowed to issue.

Respectfully Submitted,

SpryIP, LLC

Dated: <u>September 11, 2010</u>   By: <u>/Tim R. Wyckoff/</u>

Tim R. Wyckoff
Reg. No. 46,175

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)
LAN0076US

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]	Application Number	Filed
	10/559,697	08-26-2006

on ___Submitted via EFS___

Signature_____

	First Named Inventor
	Axel Clausen

Typed or printed name _____	Art Unit	Examiner
	2611	NEFF, MICHAEL R

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
       Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

☑ attorney or agent of record. Registration number ___46175___.

☐ attorney or agent acting under 37 CFR 1.34.

Registration number if acting under 37 CFR 1.34 _____

/Tim R. Wyckoff/
_____
Signature

Tim R. Wyckoff
_____
Typed or printed name

2069059678
_____
Telephone number

September 11, 2010
_____
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.
Submit multiple forms if more than one signature is required, see below*.

☐ *Total of _____ forms are submitted.

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